UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,661	12/14/2000	Arturo A. Rodriguez	A-6280	8279

7590 07/17/2006	EXAMINER
Scientific-Atlanta Inc	AN, SHAWN S

ART UNIT	PAPER NUMBER
2621	

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DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/736,661	RODRIGUEZ ET AL.
	Examiner	Art Unit	
	Shawn S. An	2621	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 May 2006</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>38,53-55 and 65-84</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>38,53-55 and 66-84</u> is/are rejected.

7)☒ Claim(s) <u>65</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   As per Applicant's instructions as filed on 5/15/06, claims 1-37, 39-52, and 56-64 have been canceled.

Claim Objections

2.   Claim 65 is objected to because of the following informalities: Claim 65 is omitted. Furthermore, the previous claim 65 depends from claim 61, which is now canceled.

        Appropriate correction is required.

Response to Applicant's remarks on Restriction/Election

3.   Applicant's election without traverse of the Species X corresponding to Fig. 6, which read on claims 38, 53-55, and 66-84, in the reply filed on 5/15/06, has been acknowledged.

Response to Remarks

4.   Applicant's arguments with respect to amended and newly added claims as filed on 12/16/05 have been carefully considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 38, 53-54, 71-73, 75-77, and 79-81 are rejected under 35 U.S.C. 103(a)
as being unpatentable over MacInnis et al (6,570,579 B1) in view of Boyce et al
(5,614,952) and Kalra et al (5,953,506).

Regarding claim 38, MacInnis et al discloses a method implemented in a DHCT
(Fig. 1) for adapting to resource constraints of the DHCT, comprising:

retrieving a set of reconstructed decompressed (decoded) video data (Fig. 2, 50)
from a first portion of a memory component, wherein the set of video data corresponds
to a video picture (Fig. 2, Memory; col. 5, lines 5-18);

transferring the set of retrieved reconstructed decompressed (decoded) video
data (Fig. 2, 50) to a display device (abs.; television display; Fig. 2, Video Out) while
downscaling (52; col. 5, lines 65-67; col. 6, lines 1-9) the video picture in transit to the
display device.

MacInnis et al does not seem to particularly disclose determining whether a
resource constrained mode is to be initiated, and responsive to determining that the
resource constrained mode is to be initiated, initiating the resource constraint mode.

MacInnis et al also does not seem to particularly disclose the memory
component storing compressed video data in a distinct second portion.

However, Kalra et al teaches a scalable media delivery system, comprising
determining whether a resource constrained mode is to be initiated, and responsive to
determining that the resource constrained mode is to be initiated, initiating the resource
constraint mode (col. 17, lines 10-55) for reproducing video images with a resolution
that is optimized to the capabilities of the client computer (col. 1, lines 66-67; col. 2,
lines 1-3).

Furthermore, Boyce et al teaches digital video decoder comprising retrieving a
set of reconstructed decompressed (decoded) video data from a first portion (Fig. 1,
118) of a memory component (114), wherein the memory component stores
compressed video data in a distinct second portion (116), wherein the set of video data
corresponds to a video picture (col. 4, lines 64-67; col. 5, lines 1-4; col. 10, lines 44-50)
for efficiently managing the memory resources such as size or the bandwidth (col. 10,
lines 1-4).

Therefore, it would have been considered obvious to a person of ordinary skill in the relevant art employing a DHCT for adapting to resource constraints of the DHCT as taught by MacInnis et al to incorporate all of the teachings as taught by Kalra et al and Boyce et al for reproducing video images with a resolution that is optimized to the capabilities of the client computer and efficiently managing the memory resources such as size or the bandwidth.

Regarding claims 53-54, MacInnis et al discloses a method implemented in a DHCT (Fig. 1) for adapting to resource constraints of the DHCT, and a DHCT comprising logic configured for:

retrieving from a first portion of a memory component (Fig. 1, VIDEO IN), a set of compressed pictures (Fig. 2, Video In entering Video Decoder);

storing in a second memory component (Fig. 2, Memory ;Fig. 1, element 28; col. 3, lines 1-3) a set of decoded pictures (from 50) corresponding to the set of compressed pictures, each of the set of decoded pictures being at a first spatial resolution (Fig. 3, 52; col. 3, lines 1-3);

retrieving from the second memory component the set of decoded pictures (Fig. 2, 50; col. 3, lines 1-3);

transferring the set of retrieved decoded video pictures (Fig. 2, 50) to a display device (abs.; television display; Fig. 2, Video Out) while scaling (52; col. 5, lines 65-67; col. 6, lines 1-9) the video pictures in transit to the display device.

MacInnis et al does not seem to particularly disclose determining whether a resource constrained mode is to be initiated, and responsive to determining that the resource constrained mode is to be initiated, initiating the resource constraint mode.

MacInnis et al also does not seem to particularly disclose the memory component storing and retrieving a set of decoded pictures in <u>a distinct second portion</u>.

However, Kalra et al teaches a scalable media delivery system, comprising determining whether a resource constrained mode is to be initiated, and responsive to determining that the resource constrained mode is to be initiated, initiating the resource constraint mode (col. 17, lines 10-55) for reproducing video images with a resolution

that is optimized to the capabilities of the client computer (col. 1, lines 66-67; col. 2, lines 1-3).

Furthermore, Boyce et al teaches digital video decoder comprising retrieving a set of compressed pictures from a first portion (Fig. 1, 116) of a memory component (114), wherein the memory component stores decoded video pictures in a distinct second portion (116) of the memory component, wherein the set of video data corresponds to a video picture (col. 4, lines 64-67; col. 5, lines 1-4; col. 10, lines 44-50), and transferring a set of retrieved decoded pictures (Fig. 4, 402, 403) to a display device (To Display) to a second spatial resolution without storing pictures in a memory component, wherein the second spatial resolution is smaller than the first spatial resolution (from 401) for efficiently managing the memory resources such as size or the bandwidth (col. 10, lines 1-4) and implementing picture-in-picture capabilities in a digital TV without incurring the cost of multiple full resolution decoders (col. 2, lines 37-40).

Therefore, it would have been considered obvious to a person of ordinary skill in the relevant art employing a DHCT for adapting to resource constraints of the DHCT as taught by MacInnis et al to incorporate all of the teachings as taught by Kalra et al and Boyce et al for reproducing video images with a resolution that is optimized to the capabilities of the client computer and efficiently managing the memory resources such as size or the bandwidth, and for implementing picture-in-picture capabilities in a digital TV without incurring the cost of multiple full resolution decoders (col. 2, lines 37-40).

Regarding claim 71, MacInnis et al discloses transmitting graphics data to the display device (Fig. 2, 50; abs.; television display; Fig. 2, Video Out), and Boyce et al teaches graphics data (Fig. 4, 401) being displayed contemporaneously with the scaled video data (402, 403).

Regarding claims 72-73, 75-77, and 79-81, MacInnis et al discloses horizontal and vertical downscaling (col. 44, lines 14-21).

7.   Claims 55, 66, 68-70, and 83-84 are rejected under 35 U.S.C. 103(a) as being
unpatentable over MacInnis et al (6,570,579 B1) in view of Kalra et al (5,953,506).

Regarding claims 55 and 66, MacInnis et al discloses a computer readable
medium containing a program for use in a DHCT (col. 5, lines 27-30) and a method
implemented in a DHCT (Fig. 1) for adapting to resource constraints of the DHCT,
comprising:

receiving, in a memory component (Fig. 1, VIDEO IN), video data comprising a
complete picture;

retrieving the video data from the memory component (Fig. 1,10);

transferring the retrieved video data (Fig. 2, 50) to a display device (abs.;
television display; Fig. 2, Video Out) while downscaling (52; col. 5, lines 5-67; col. 6,
lines 1-9) the video picture in transit to the display device.

MacInnis et al does not seem to particularly disclose determining whether a
resource constrained mode is to be initiated, and responsive to determining that the
resource constrained mode is to be initiated, initiating the resource constraint mode.

However, Kalra et al teaches a scalable media delivery system, comprising
determining whether a resource constrained mode is to be initiated, and responsive to .
determining that the resource constrained mode is to be initiated, initiating the resource
constraint mode (col. 17, lines 10-55) for reproducing video images with a resolution
that is optimized to the capabilities of the client computer (col. 1, lines 66-67; col. 2,
lines 1-3).

Therefore, it would have been considered obvious to a person of ordinary skill in
the relevant art employing a DHCT for adapting to resource constraints of the DHCT as
taught by MacInnis et al to incorporate all of the teachings as taught by Kalra et al for
reproducing video images with a resolution that is optimized to the capabilities of the
client computer.

Regarding claims 68-69 and 83-84, MacInnis et al discloses horizontal and
vertical downscaling (col. 44, lines 14-21).

Regarding claim 70, MacInnis et al discloses downscaled video pictures being not stored in the memory component, but rather stored in the memory component of Fig. 2 or Fig. 1, element 28 (col. 3, lines 1-3).

8.   Claims 67, 74, 78, and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacInnis et al and Kalra et al as applied to claims 66, 53, 54, and 55 above, respectively, and further in view of Boyce et al (5,614,952).

Regarding claims 67, 74, 78, and 82, MacInnis et al discloses transmitting graphics data to the display device (Fig. 2, 50; abs.; television display; Fig. 2, Video Out).

MacInnis et al and Kalra et al do not seem to particularly disclose the graphics data being displayed contemporaneously with the scaled video data.

However, Boyce et al teaches graphics data (Fig. 4, 401) being displayed contemporaneously with the scaled video data (402, 403) for implementing picture-in-picture capabilities in a digital TV without incurring the cost of multiple full resolution decoders (col. 2, lines 37-40).

Therefore, it would have been considered obvious to a person of ordinary skill in the relevant art employing a DHCT for adapting to resource constraints of the DHCT as taught by MacInnis et al to incorporate all of the teaching as taught by Boyce et al for implementing picture-in-picture capabilities in a digital TV without incurring the cost of multiple full resolution decoders.
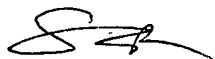

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Shawn S An* whose telephone number is 571-272-7324.

10.   The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11.   Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

SHAWN AN
PRIMARY EXAMINER

7/11/06